

October 2004

The

*Ballarat*

*Naturalist*



## Healthy Rivers

Speaker: Paul Sinclair of Environment Victoria

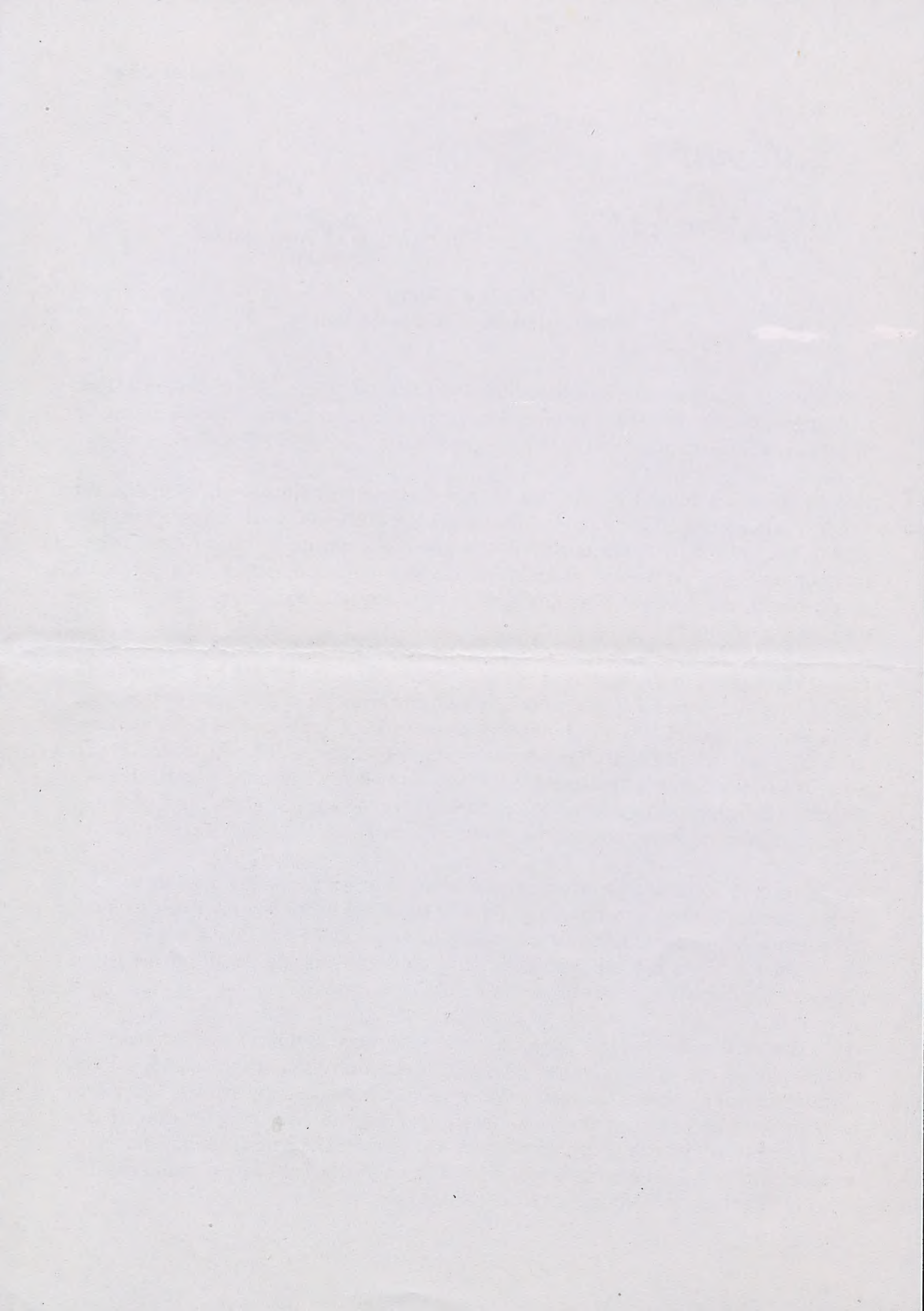
*Environment Victoria* was established in 1969 for the Little Desert National Park Campaign. *Healthy Rivers* is one of its four strategic campaign areas. Its other areas of interest are global warming, sustainable living and sustainable production.

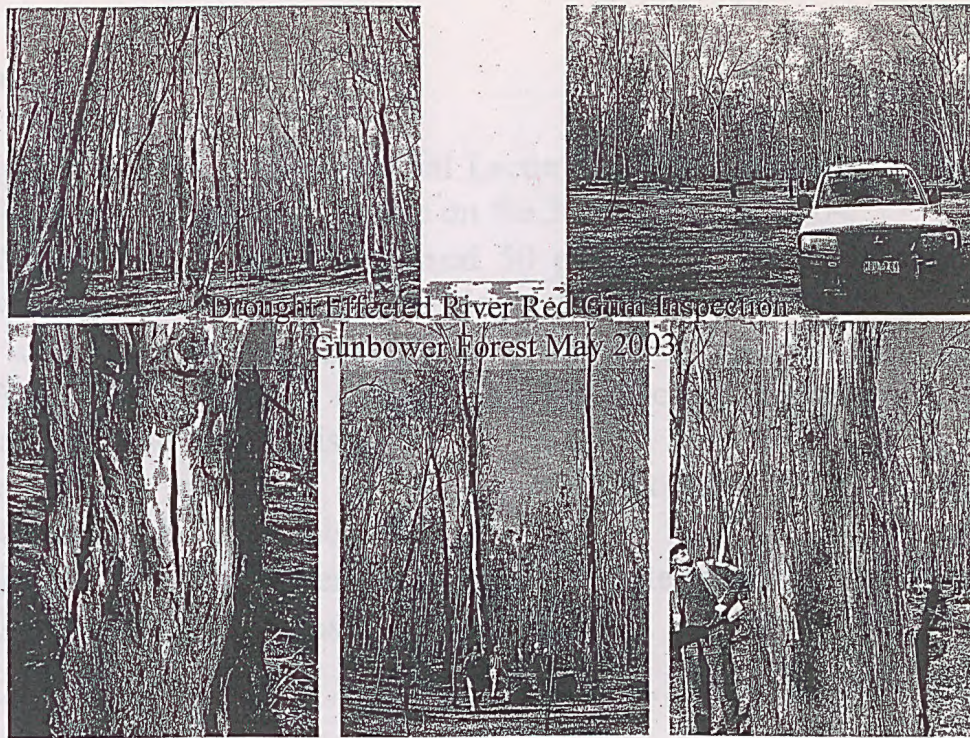
Healthy rivers are defined as ones that are connected to their floodplains, estuarine and marine environments. They support self-sustaining populations of native fish, plants and birds. They also have water quality that is good to swim in, to irrigate land and to maintain ecological processes. Australia has the second highest user of water per capita on the planet, the dryness of our continent being a major factor in this. One dare not imagine life without healthy rivers.

Only 25% of rivers in Victoria are in good/excellent condition, the best ones being in the east of Victoria. Victoria's water is mainly used for irrigation (77%) with the two other lesser uses being rural (17%) and urban/industrial (6%). Figures quoted in billion litres for 2000-1 are Victorian agriculture: dairy farming -1685, fruit - 209, vegetables 131 and rice -26. Urban mains water supply is 737 and its industry 248 billion litres. Figures (source: ABS) show that irrigation of vegetables have the greatest gross value per ml of water used, with sugar, pastures and rice having the least.

The problem in Victoria is we take too much water out of our rivers which cannot then get to their floodplains and estuaries, and so die. About 75% of the Murray River's flow is taken for use in irrigation and city water supply, leaving only 25% to flow to the sea. This has resulted in about half the gum trees being stressed along the length of the River. Photos shown displayed patches of trees with few or no leaves.

This River system that has less water has resulted in more sediments that has made the river shallower and killed the fish. Also nutrients from farms have caused a 100% increase in algal blooms in ten years. Water has become more salty and by 2020 it will result in Adelaide's water being undrinkable two days in five. The Murray cannot naturally replenish its native fish populations and forest. The annual Murray cod catch has been reduced from a maximum of nearly 143 tonnes fifty years ago to minimums of 5 tonnes in recent years. Fishing ain't what it used to be!





Drought-affected River Red Gum Inspection  
Gunbower Forest May 2003

Drought-affected River Red Gum Inspection Gunbower Forest May 2003

The solutions to the problem include the recovery of water for the environment by decreasing the use of water and increasing water productivity. Actions that are being considered include: recover water from the environment, reduce cold water pollution, return snags to the River, put fish ladders into the weirs and protect riverbank vegetation. Science suggests that, to give the River a fighting chance of survival we must reduce the amount of water we take out of the Murray by 15% in the next ten years. Murray Wetlands Working Group will work to restore healthy wetland. Nurseries are necessary to return to the environment native fish, strong trees and clean water.

The reduction in use of the Murray's water will moderate 'whole of river' ecological benefits. For 60% of the years there would be improved waterbird habitat and improved floodplain vegetation with a little less improved wetland vegetation habitat. There would also be substantial improvement in River Red Gum forests and woodland condition in 35% of the years and substantial reduction in river salinity in SA. Finally it would result in a major reduction in the risk of toxic algal blooms.

Water from the Murray could come from compulsory sales of water at voluntary prices with water purchased on the open market. Farmers could use the "bush tender" approach to bid for funds. There would also need to be regulated, phased reduction of water entitlements. Lastly, upgrading infrastructure would result in cost effective investment.

All these changes would need Government backing and at this stage support is given in various degrees by the different Federal political parties. We, as concerned citizens need to note their policies and lobby where necessary.

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"As a boy I used to leave no terns unstoned", Tim Bowden, ABC Radio



## Meeting Points

- 26<sup>th</sup> Annual Stella Bedggood Memorial Lecture of Field Naturalists Club of Ballarat held at the Ballarat Horticulture Centre on the 3rd September 2004
  - The President, Peter Dalman, welcomed 50 people including Kathryn King MHR, Geoff Howard MLA, members of the Bedggood family and visitors.
  - Apologies were received from David Vendy, Mayor of Ballarat, Irene Hooper, Helen Burgess, Frank Harrap, Pat and Bill Murphy, Val Hocking, Eileen Anderson, Lorraine and Lyndsay Fink and Bob Christie.
  - The Guest Lecturer was Paul Sinclair from Environment Victoria, who spoke on "Healthy Rivers" as described above.
  - Mr Sinclair was thanked by Peter Dalman and presented with a gift.
  - Supper was served at the conclusion of the evening.
- .....

## Excursion: Goldfields Water-race Walking Trails. Leader John Gregurke.

The Enfield Forest race network is a water catchment system that transported water from various catchments, with dams and water-races around land contours from valley to valley, terminating at gold sluicing areas. Part of this system was Boden's dams and race, built from about 1864, which linked dams south of Ross Creek with Boden's Hard Hill sluicing operation. Our September excursion followed some of Boden's race starting from the intersection of Wades Lane and Doctors Road.

On a pleasant early spring day after recent rain the ground was moist under foot. With more normal winter rain this year there should be better growth this spring. Before lunch we walked along Boden's walking trail to Boden's dams No.1 and No. 2. Mauve-flowered common Hovea *H. heterophylla* and *Hardenbergia violacea* as well as Woolly Wattle *Acacia lanigera* were already flowering. Flower buds were opening on Golden Bush-pea *Pultenea gunnii* and Common Wedge-pea *Gompholobium huegelii*. Leaves of bird orchid plants were seen. Other plants seen included Hop Goodenia, Native violet, Pink Heath, Cranberry Heath, Silver Wattle and the Tall Greenhood orchid *Pterostylis melagramma*.

The dam wall on Boden's No. 1 dam had been breached. The outlet pipe and valve had been removed. There was water in Boden's No.2 dam. A vocal chorus of frogs could be heard near the dam.

A large 20cm White Jelly fungus *Tremella fuciformis* and a smaller Brown Jelly fungus *T. frondosa* were growing on fallen logs. An orange-yellow capped Pretty Grisette *Amanita xanthocephala* had grown up through leaf litter on the ground. A conical dark-brown capped mushroom growing among moss was possibly one of the *Galerina* species. Puffballs *Lycoperdon sp.* released a cloud of brown spores when squeezed. Small spots of colour on the ground were the Yellow Earth Buttons *Discinella terrestris*.





*White Jelly fungus Tremella fuciformis*



*Upright branches on fallen tree & note-taker*

On our way back we saw the endemic Enfield grevillea *Grevillea bedgoodiana* with some flower buds. Milky Beauty-heads, Swamp Isotome, Peach Heath and Thin-leaf Wattle were also seen. A good view was had of a male Scarlet Robin and Brown-headed Honeyeaters. The Big Dam where we had our lunch is now the largest dam in this water race system. It covers several hectares of shallow water in which Spike-rush was growing. Prickly tea-tree *Leptospermum continentale* was growing around the edges. A Great Egret was feeding near the edge. Swamp-hens and Moor-hens were moving among the Spike-rush. Two Swamp-harriers appeared and started to circle overhead.

After lunch we walked to the State Forest Road dam. The wall on this dam was also breached. Only four of the twelve dams built can now hold water. Silver banksia *Banksia marginata* was growing below the Big Dam. The Brown Belly-button fungus *Omphalina erictorum* were growing on slime on bare ground. On top of the wall of the State Forest Road dam were Nodding Greenhoods *Pterostylis nutans*. Other plants seen near here included Grass Trigger-plants, Small Grass-tree, Showy violet *Viola betonicifolia*, Grey Everlastings and Red-anthered Wallaby grass.

Trees seen today included Narrow-leafed Peppermint, Brown Stringybark, Manna, Swamp and Yarra gums. One interesting feature was the upright branches growing from a fallen tree shown in the photo above.

Les Hanrahan



## Norfolk Island



Recently we spent a week on tiny Norfolk Island – 1440km east of Brisbane in the South Pacific. We explored alone, except for an Island Farm and Industry tour, and a progressive dinner into four Island homes – all owned by descendants of the original settlers relocating from Pitcairn Island. These excursions allowed us to find out a little about Norfolk life and to say a few things in the local language (commonly spoken) which is a combination of 18th century seafaring English and Tahitian from the women the Bounty mutineer sailors married. Children learn the language at school and are encouraged to speak it. The local weekly newspaper has a teaching section.

Norfolk is a curious mixture of sophisticated duty free shops (about seventy) and rural life. We thought we would write snippets we found interesting.

With electricity provided by diesel generators costing 38c/kwh compared with about 14c in Victoria, there are no electric ovens or air-conditioning and everything looks quiet at night with only one overhead street light and few shop lights. There is no harbour so ships anchor offshore with lighters used to transfer goods to shore. Woe betide anybody who needs urgent medical care on the mainland. Evacuation flights cost \$35,000 which needs to be paid up front.

Cows have right-of-way and other than grids excluding them from the town and homes, they wander at will. Any farmer who successfully bids to graze roadsides is allowed up to ten cows for an annual charge of \$50 each. Hens, roosters and geese similarly roam, even in quite unexpected places. Rooster calls are frequent. These birds are descendents of poultry let loose in early times. Market gardens are poorly co-ordinated so that fruit rots while others cannot buy it – most is pre-ordered to supply the many restaurants and most islanders grow vegetables and swap surplus with neighbours. Fresh produce, shipped mostly from New Zealand is expensive. Milk is \$5.00 a litre so UHT is usual. The island, is volcanic with topsoil twenty metres deep.

Norfolk Island pine trees and Kentia palms are grown from seed and exported, mostly to Holland for on-selling. Pine seeds, sometimes gathered by local Guides, earn \$20 per kg. The Norfolk pines form cones in heavy crops about every four or five years but also some at other times. For every tree harvested (with permission even on private land) you must plant five more. It is locally milled and air-dried for about 9 months. A local factory produces soft drinks and liqueurs. Coffee is



grown and processed and there are other small industries, but tourism is the major industry.

Close to the main island is Phillip Island. Originally lushly vegetated, it was denuded by rabbits, pigs and goats until rehabilitation began in 1985. One enduring custom we found surprising is that each October and November islanders gather thousands of eggs of the Sooty Tern to eat. Locally called the 'whale-bird' as they arrived during the whaling season (now discontinued). The second laying is left to hatch.

Phillip Island is the home of a small colony of Providence Petrels which became extinct on Norfolk following the harvesting of 172,000 to sustain the convict colony when a supply ship was wrecked. The name Providence came from the fact that they saved the inhabitants from starvation.

Early settlers used available plants. Parts of some were edible. Samsons sinew or Norfolk Island wisteria (*Millettia australis*) a flexible vine was used for rope. Norfolk Island grass tree (*Freycinetia baueriana*) leaves were used for weaving articles, especially the hats still worn on Bounty Day, now made from banana leaves, corn husks and other palms. Norfolk Palm (*Rhopalostylis baueri*) supplied brooms, made from the centres of the midriff tied together (365 – one for each day of the year). Bastard oak (*Ungeria floribunda*) saplings provided fishing rods. White oak (*Lagunaria patersonia*) wood was used in lime kilns. The wood is white and soft except for the hard black centre used for walking sticks and many other useful items. Bloodwood (*Baloghia lucida*) trees provided ink for writing from convict days until the 1940s. Sia's Backbone (*Streblus pendulinus*) leaves, being rough were used as sandpaper. Norfolk pine (*Araucaria heterophylla*) made roof shingles. Captain Cook expected trunks to yield masts but they proved unsuitable. Broad-leafed Meryta (*Meryta latifolia*) leaves were used to wrap bread for baking. Pitcairn Rau-ti (*Cordyline fruticosa*) roots were used to make an alcoholic beverage. Wild tobacco (*Solanum mauritianum*) leaves were used for toilet paper.

Peter and Claire Dalman

### **SEANA March 2005 Campout**

The SEANA March Campout, 11-14 March 2005, will be hosted by Upper Goulburn Field Naturalists' Club. It will be held at Eildon Holiday Lodge, Goulburn Valley Hwy, Snobs Creek. Accommodation will be in a bunkhouse. Full catering will be provided. Should any camp participants select motel accommodation they should make their own accommodation bookings direct with Eildon Holiday Resort, telephone \_\_\_\_\_, as soon as possible as this is a busy tourist area. Please state that you are attending the conference as at present the resort is holding these rooms on behalf of the Upper Goulburn Field Naturalists' Club.



## Some facts about plastic bags and their effects

*Quotes from New Scientist 11 Sept 2004*

A variety of pejorative nicknames:

*Witches knickers* in Ireland

*White pollution* in China

*National flower* in Sth Africa

Globally we carry home a million plastic bags a minute.

In parts of India being caught in possession of a plastic bag could get you 7 years in jail and a fine of more than \$2000.



Plastic bags have among the highest reuse rates of any reuse item. They are much more energy efficient to manufacture and transport, than bulkier heavier alternatives like paper and cardboard. Some of the energy used to make them can be recovered by incinerating them in energy-from-waste plants. Less than 1% of litter in general and rubbish sent to landfill is plastic bags.

This is true but if you want people to think about sustainability, an everyday object that most of them already feel guilty about is a good place to start .... plastic bags are symbolic of a society in which we use things without thinking and throw them away.

Biodegradable bags are not the answer ... make people feel better for doing something that is still unhelpful. To your average turtle a degradable bag looks just as much like a jellyfish as a non-degradable one.

A filter-feeder minke whale washed up in Normandy in 2002 had 800 kg of plastic bags and other packaging in its stomach.

In Bangladesh \$10 on-the-spot fine was introduced for using a plastic bag, after drains blocked by plastic bags were held responsible for the devastating monsoon floods in 1988 and 1998. Manufacturers in Bangladesh face a 10 year jail sentence and a fine of more than \$20 000.

Bag snatchers of New York with their bag-snagging device – a hook on a telescopic pole – have turned collecting tree-top litter into the coolest urban sport!



## Calendar

### October

- Fri. 1                      **Speaker: Tim Anderson-Community forest management: Wombat Forest.**  
Sun. 3                      **Excursion: Pyrite Ranges** with Greg Binns.  
Tues. 26                   **Committee Meeting @ Carol's,**  
Fri 29 Oct. - 2 Nov      **SEANA Spring Camp, Little Desert**

### November

- Fri. 5                      **Speaker: Dr. Alan Yen: Invertebrates – the other 99%.**  
Sun. 5                      **Excursion: Orchids** with Pat and Bill Murphy.

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**Supper Duty;**              **October:** volunteers required  
                                    **November:** Fran Hanrahan

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### Committee

|                       |                   |
|-----------------------|-------------------|
| <b>President</b>      | Mr. Peter Dalman  |
| <b>Vice-President</b> | Mrs. Carol Hall   |
| <b>Secretary</b>      | Mr. John Gregurke |
| <b>Treasurer</b>      | Mr. Bob Curtain   |

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| Miss Helen Burgess.....    | Miss Fran Hanrahan.....       |
| Miss Maureen Christie..... | Mr. Les Hanrahan.....         |
| Mrs. Claire Dalman.....    |                               |

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**Meetings** are held at the Ballarat Horticultural Centre, cnr. Gregory & Gillies Sts (VicRoads 254 F8) on the first Friday of the month at 7.30pm.

**Excursions:** Depart from Ballarat Market Place (formerly Creswick Plaza) Creswick Rd., Ballarat (VicRoads 255 M10) at 9.30 am unless otherwise specified.

A monthly publication of the Field Naturalists' Club of Ballarat Inc.  
Incorporation # A0014919P                      ABN 13 150 403 135

